

## Early Childhood Matters!



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## What Brain Research Tells Us...

- What we do with young children makes a difference
- We are born with a range of potential equal to about 40 IQ points
- 85% of brain development occurs before children enter kindergarten

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## Normal Brain Development



Source: *Newsweek* Special Edition, 1997

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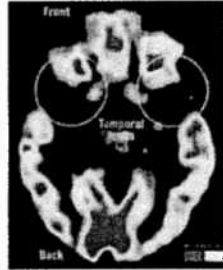
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## At-Risk Brain Development



Source: Newsweek Special Edition, 1997

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## Beginning Kindergartners School-Readiness Skills

	low SES	high SES
Recognizes letters	39%	85%
Beginning Sounds	10%	51%

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## Perry Preschool Project

- Findings of 120 participants at age 27
- Increased educational achievement
- Increased earnings and economic status
- Lower rates of criminal conviction
- Return on Investment (ROI) \$17 to \$1

([www.highscope.org/Research/PerryProject/perrymain.htm](http://www.highscope.org/Research/PerryProject/perrymain.htm))

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## Michigan School Readiness Program Evaluation

- Almost 600 students starting kindergarten in 1995 included
- Increased skills at kindergarten entry
- Increased parental involvement
- Decreased retention 38%
- Increased MEAP passage 30%

([www.highscope.org/Research/MSRPEvaluation/msrp-Age10-2.pdf](http://www.highscope.org/Research/MSRPEvaluation/msrp-Age10-2.pdf))

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## Findings replicated by other studies

- Other state preschool evaluations
- Abecedarian Project—infants to adult follow up ([www.fpg.unc.edu/~abe/executive\\_summary.htm](http://www.fpg.unc.edu/~abe/executive_summary.htm))
- Chicago Child Parent Centers—adult follow up ([www.waisman.wisc.edu/cfsebaexecsum4.html](http://www.waisman.wisc.edu/cfsebaexecsum4.html))
- Consistent findings since 1975

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## High Quality Programs Work!

- Well Trained Teachers
- Active Learning
- Intentional Curriculum
- Parent Involvement
- Ongoing Staff Supervision
- 2 Year Program Duration
- Low Staff-Child Ratio (1 to 8)

(FRN Bulletin, Dec., 1993; Neman, *PhD Thesis* Kalamazoo, Dec., 2003)

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### What about Home Visiting Programs?

- A comprehensive study of a wide variety of home visiting programs was done in 1999
- Some benefits in parenting or prevention of child abuse and neglect observed in some places on some measures
- No study produced significant, consistent benefits on child achievement
- ROI only for school based programs

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### What Does Business Say?

- A lack of early skill and motivation begets a lack of future skill and motivation. The argument for providing enriched early environments for disadvantaged young children is based on economic efficiency.

Dr. James Heckman  
University of Chicago  
Nobel Prize in Economics, 2000

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### What does Business Say?

- In today's world, where education and skill levels determine future earnings, the economic and social costs to individuals, communities and the nation of not taking action on early childhood development are far too great to ignore.

A Call to Action for the Business Community  
The Business Roundtable

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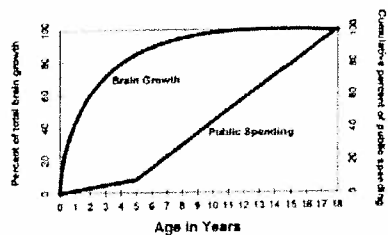
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## Opportunity Lost



Provided by Paul Nelson, Director of Michigan FIA

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**IT'S EASIER TO  
BUILD  
THE BRAIN  
OF A YOUNG CHILD,  
THAN REPAIR  
THE BRAIN  
OF AN ADULT**

Lawton and Rhea Chiles Center for Healthy Mothers and Babies

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# **The Productivity Argument for Investing in Young Children**

**By James J. Heckman and Dimitriy V. Masterov**

On productivity grounds alone, it appears to make sound business sense to invest in young children from disadvantaged environments. An accumulating body of evidence suggests that early childhood interventions are much more effective than remedies that attempt to compensate later in life for early neglect.

*"Enriched pre-kindergarten programs available to disadvantaged children on a voluntary basis, coupled with home visitation programs, have a strong track record of promoting achievement for disadvantaged children, improving their labor market outcomes and reducing involvement with crime."*

*"Such programs are likely to generate substantial savings to society and to promote higher economic growth by improving the skills of the workforce."*

*"The issue of assisting children of [disadvantaged families] often has been cast as a question of fairness or social justice. This paper makes a different argument. We argue that, on productivity grounds, it appears to make sound business sense to invest in young children from disadvantaged environments."*

## **The U.S. workforce is not as productive as it needs to be**

U.S. labor force skills are generally poor. Labor force quality has stagnated and already reduced American productivity growth. If current trends continue, the U.S. economy will add many fewer educated persons to the workforce in the next two decades than it did in the past two decades. "This is a major drag on U.S. competitiveness and a source of social problems."

*"The emergence of new technologies associated with advances in computing has raised the demand for highly skilled workers."*

*"Over 20% of U.S. workers are functionally illiterate and innumerate, a much higher percentage than in leading European countries."*

*"Over the past 40 years, the aggregate birth rate has declined, but relatively more of all American children are born into adverse environments." These children will form much of the future workforce, and they need help to become as productive as the country needs them to be.*

*"The U.S. workforce is aging and will not grow in the near future as Baby Boom retirements put great stress on the fiscal system."*

*"Based on current trends, the annual rate of productivity growth attributable to education—0.35 from 1980-2000— will decline by half or more in the next two decades."*

## **Ability gaps open early in life, and may persist without intervention**

Ability gaps between disadvantaged and other children open up early, before schooling begins. Conventional school-based policies start too late to completely remedy early deficits, although they can do some good. Children who start ahead keep accelerating past their peers, widening the gap.

*"Learning begets learning and skill begets skill. Early advantages accumulate, so do early disadvantages."*

*Returns are highest for investments made at younger ages and remedial investments are often prohibitively costly.*

*"The best way to improve the schools is to improve the early environments of the children sent to them."*

## **Quality early education is a key part of the solution to this problem**

Studies of early education interventions directed towards children in low-income families with long-term follow up find that these programs can greatly help reduce (but not completely eliminate) that gap. Participants experienced increased achievement test scores and high school graduation, and decreased grade retention, time in special education, experience with crime and delinquency. These gains persist into adulthood, contradicting the perception that they fade within a very few years. These programs benefit not only the participants, but their own children and society at large.

*The estimated rate of return for the Perry program participants was 16% to participants and society.*

*Extending the program to all of the 4 million children under age 5 who are currently living under the poverty line would yield an estimated private net benefit to the participants of \$102.4 billion and to the public of \$409.2 billion, for a total benefit of over \$511 billion.*

*"It is the large social benefits for the general public—stemming from the savings to taxpayers, victims of crime and employers—that make the firmest case for [preschool] programs...Early interventions can add great value to the output of American society."*

## **Achieving a better future for children and a more productive society**

Children who have quality early education will start on a better life trajectory that means they are not only more successful in the early years, but will be better able to use higher education and job training later in life. Workers who need to change careers or just acquire new skills will benefit from better learning abilities acquired early in life.

*The biggest obstacle to disadvantaged students' taking advantage of higher education is ability to learn, not ability to pay. Substantial gaps in college-going rates of different racial and ethnic groups are due less to family income than to youths' readiness to take on a college curriculum.*

**Conclusion:** Our emphasis on early childhood interventions does not deny the importance of schools or firms in helping children and adults become as productive as they can be. The early investment must be supplemented by the later investment to be successful. Indeed, if the policies we recommend are adopted, schools will be more effective, firms will have better workers to employ and train, and the prison population will decline. At lower cost to society, bolstered families will produce better educated students, who can get better jobs and be better citizens.

The best way to improve the American workforce of the 21<sup>st</sup> century is to invest in early education to ensure that even the most disadvantaged children have the opportunity to succeed alongside their more advantaged peers.